

NOTES ON CLEISTES AND TRIPHORA (ORCHIDACEAE)

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ABSTRACT. Preparation for the treatments of Pogoniinae and Triphoreae (Orchidaceae) for Flora of North America, Flora Mesoamericana, Flora de Mexico, and Flora of the Guianas has indicated the need for nomenclatural changes and clarification of authorship in several species. The following new combinations are proposed: *Cleistes vargasii* comb. nov.; *Triphora trianthophora* subsp. *mexicana* comb. & stat. nov. In addition, *Triphora rickettii* is placed in the synonymy of *Triphora yucatanensis* and the complete author citations for *Cleistes bella*, *C. caloptera*, and *C. mantiqueirae* are given.

While reviewing literature in preparation for treatments of the subtribe Pogoniinae and tribe Triphoreae (Orchidaceae) for Flora of North America, Flora Mesoamericana, Flora de Mexico, and Flora of the Guianas, I found that at least one combination for *Cleistes* had never been published and that authorship of three other species is consistently cited wrongly in the literature. Study of *Triphora* specimens indicated that taxonomic changes in that genus are also required.

According to the International Code of Botanical Nomenclature—Article 34.1 (Greuter et al., 1988)—a combination is not validly published when the genus to which it belongs is alluded to, but the taxon is clearly included by the author under another genus or concept. When Reichenbach (1881) described several species of orchids, he parenthetically indicated the genus *Cleistes* L. C. Richard for three of them, but clearly rejected that generic concept and published them under the broad concept of *Pogonia* A. L. Jus-sieu, a taxonomic opinion which Reichenbach had previously adopted and which is exemplified by his treatment of *Pogonia* in Band 2 of his classic *Xenia Orchidacea* (1865).

The types for H. G. Reichenbach's orchid taxa are often undesigned and consist of one or more sheets of specimens (often incomplete) and/or drawings. They often include only scanty data which are often unreadable on the IDC microfiche of the Reichenbach Herbarium (Burns-Balogh, 1987). They are cited in this paper as to the collector and locality as cited by Warming (1886).

When Schlechter (Schlechter & Hoehne, 1926) transferred several species of *Pogonia* to *Cleistes*, he apparently did not recognize that *Cleistes bella*, *C. caloptera*, and *C. mantiqueirae* had not been published validly as members of the genus *Cleistes* by Reichenbach (1881). Under Article 42 of the Code, however, they were validly published under the concept of *Cleistes* by Schlechter & Hoehne (1926). They should be correctly and completely cited as below.

Cleistes bella (Reichenbach f. & Warming in Reichenbach f.) Schlechter in Schlechter & Hoehne. Basionym: *Pogonia bella* Reichenbach f. and Warming in Reichenbach f., *Otia Bot. Hamb.* 2: 82. 1881. Type: E. Warming [Brazil] Minas Gerais, Lagoa Santa, in campsis. Floret Jan. Febr. (w).

Cleistes caloptera (Reichenbach f. & Warming in Reichenbach f.) Schlechter in Schlechter & Hoehne. Basionym: *Pogonia caloptera* Reichenbach f. & Warming in Reichenbach f. *Otia Bot. Hamb.* 2: 82. 1881. Type: E. Warming [Brazil] Minas Gerais, Lagoa Santa, in marginibus silvarum locis humidiusculus, et in campsis fertilibus. Floret Aprili (w).

Cleistes mantiqueirae (Reichenbach f. & Warming in Reichenbach f.) Schlechter in Schlechter & Hoehne. Basionym: *Pogonia mantiqueirae* Reichenbach f. & Warming in Reichenbach f. *Otia Bot. Hamb.* 2: 81. 1881. Type: E. Warming [Brazil] Minas Gerais, Serra Mantiqueira, in decliviis juxta viam per silvis ducentum, m. maio flor (w).

After extensive search, I have been unable to locate a publication subsequent to that of C. Schweinfurth (1951) referring *Pogonia vargasii* to *Cleistes*. It is therefore necessary to validate this combination for future use.

Cleistes vargasii (C. Schweinfurth) M. E. Medley, comb. nov. Basionym: *Pogonia vargasii* C. Schweinfurth. *Bot. Mus. Leaf.* 15: 1, t. 1, fig. 6. 1951. Type: Peru, Prov. Convencion, Cuzco, Sahuayaco-Cascarillayoc, 1,700 m, on grassy slopes, Vargas 6306 (AMES).

Intensive study of *Triphora* specimens from the United States, Mexico, and Central America indicates the necessity of recognizing two subspecies of *Triphora trianthophora* and reducing *T. rickettii* to synonymy.

Triphora trianthophora (Swartz) Rydberg in Britton subsp. *mexicana* (S. Watson) M. E. Medley, comb. & stat. nov. Basionym: *Pogonia mexicana* S. Watson *Proc. Amer. Acad. Arts* 26: 154. 1891. Type: Mexico, San Luis Potosi, Tama-

sopo Canyon. 5 Aug. 1890, G. C. Pringle 3557 (AMES).

This subspecies differs from the typical in usually having purple markings on the middle lobe of the lip, either marginally, along the veins, or in an irregular pattern, whereas subsp. *trianthrophora* never has these markings. The leaves are often more broadly ovate or rotund and are often, but not always, basally disposed and reduced upwards, and are often purple beneath. The leaves of the typical variety are usually narrower and more evenly spaced and are usually green beneath, though occasionally suffused or veined with purplish.

Triphora yucatanensis Ames Orch. 7: 39, t. 109. 1922. Type: Yucatan, Kantunil Rd., floret Novebri. Gaumer 1008 (F).

The illustration of this species in the original publication is in error. The flowers are shown as resupinate and subinclined. An original water color done by Blanche Ames from the type specimen (AMES) clearly shows the flowers as erect and nonresupinate and the single remaining open flower on the holotype (F) is erect and nonresupinate.

The series of existing specimens of *Triphora rickettii* C. Luer [Brittonia 18: 241. 1966. Type: Florida, Hillsborough Co., 7 mi east of Brooksville, 20 Aug. 1964. C. A. Luer s. n. (NY)] has erect, nonresupinate flowers and *T. yucatanensis* vegetatively is within the variation of the series of *T. rickettii* specimens and cannot be distinguished from it. *Triphora rickettii* is therefore reduced to the synonymy of *T. yucatanensis*. I have discussed this with Dr. C. A. Luer and he is in agreement with this opinion.

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UNCC, US, USF, and WVA. Acronyms follow Holmgren et al. (1981).

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